Rising water demand of energy sector

What is the issue?

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The water demand for the energy sector is projected to rise and makes it necessary to report its water consumption in the coming years.

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What is the situation of water crisis in India?

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- The Composite Water Management Index (CWMI) by the NITI Aayog shows that 600 million people face high to extreme water stress in India.
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- The water quality index report places India at a dismal 120 among 122 countries.
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- It predicts that a persistent water crisis will lead to an eventual 6% loss in the country's GDP by 2030.
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- A significant key to this stress is the vast gulf that has been predicted between the demand [1498 billion cubic metres (BCM)] and supply [744 BCM] of fresh water, by 2030.
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How far is the power sector, water dependent?

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- In its 2015 projections, the Central Water Commission (CWC) reported that the sector-wise requirement of water (drinking and domestic use, industry and energy) will rise steeply between 2030 and 2050.
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- This is especially true in the energy sector, whose share of water consumed was 0.62% in 2010.
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- This is pegged to rise up to 1.37% in 2030 and 8.98% in 2050.
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- Thermal electricity accounts for more than 86% of India's total power generation.
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- Analysis shows that 77% of these thermal power plants that are dependent on freshwater sources.
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- Around 40% of them are installed in areas with high or extremely high water-stress.
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- By 2030, more than 70% of India's existing thermal power utilities are likely to experience an increased level of water competition from agricultural, urban, and other industrial demands.
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- As the power sector consumes more water, competition between power and the other thirsty players is only likely to increase.
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What should be done?

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- The CWMI raises three main issues related to data such as limited coverage, unreliable data and limited coordination and sharing between line departments.
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- To rectify this, daily water withdrawal and consumption reporting should be mandated.
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- These can be measured with existing technology and added into this reporting framework.
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- Such information will also help in the implementation of the MoEFCC Notification, which mandates specific water consumption norms for existing and new thermal power plants.
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How does the CWMI help in this regard?

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- CWMI is expected to establish a public, national platform providing information on key water indicators across states.
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- The platform will help in monitoring performance, improving transparency and encouraging competition among the states.
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- This will, in turn, boost the country’s water achievements by fostering the spirit of competitive and cooperative federalism among the states.
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- Further, the data can also be used by researchers, entrepreneurs, and policymakers to enable broader ecosystem innovation for water in India.
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- The CWMI noted that water-scarce States such as Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra and Telangana are leaders in the Index.
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- It notes that this is likely driven by necessity in the face of looming water shortages.
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- Thus, water-energy nexus linkages, especially the metrics around power plant water withdrawal and consumption, have to be factored in while calculating the Index.
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- This will help make the Index better and also the States to be better prepared on managing their water and power resources.
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Source: The Hindu

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